Residential Storage Sheds

Detached storage sheds which are accessory to a single family dwelling, are required to be built to the minimum construction standards of the Virginia Uniform Statewide Building Code (VaUSBC).

A shed which is less than or equal to 150 ft^2 in area, does not require a building permit. A shed which is greater that 150 ft^2 in area, does require a building permit. To determine the area of a shed, multiply the overall outside width *x* the overall outside length. For shapes other than rectangular, determine the overall outside dimensions to calculate the area. All sheds, regardless of size, are subject to zoning regulations. To learn which zoning regulations apply, please call 703 385-7820.

All sheds (and all other structures regulated by the VaUSBC) are required to have an adequate foundation. Manufactured sheds which are constructed off site and delivered to a homeowner, are often constructed on a base of 4 x 4 runners. These 4 x 4 runners by themselves, do not constitute a proper foundation.

A foundation and its structural elements shall be capable of supporting all superimposed live, dead and lateral loads, and transferring these loads to bearing soil. All exterior walls shall be supported on continuous solid masonry or concrete footings, wood foundations, or other approved structural systems which shall be of sufficient design to support safely the loads imposed, and except where erected on solid rock or otherwise protected from frost, shall extend below the frost line. For the City of Fairfax, all footings subject to frost shall be a minimum of 24" below finished grade. The following drawings show some typical foundation details. The actual size of each foundation member will depend upon the structure it supports, and the bearing capacity of the soil.

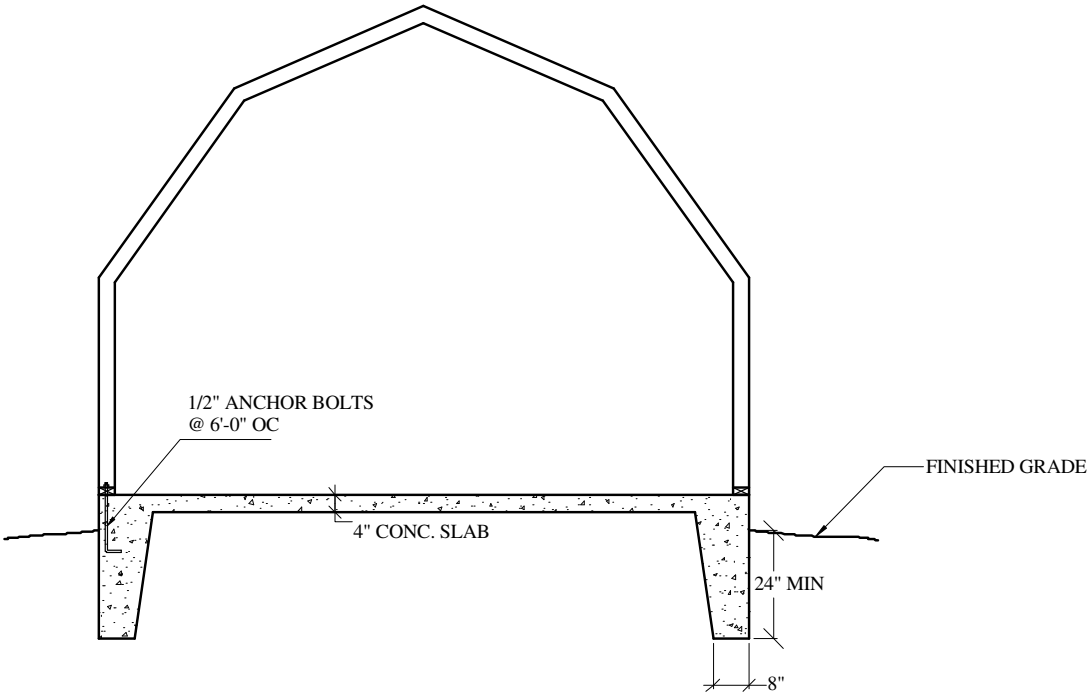
Sheds which do not have a permanent foundation (sheds less than 256 ft^2 in area are not required to have a foundation), are required to be anchored to the ground (or concrete/asphalt pad), in order to resist being moved by high winds. For sheds on the ground, earth auger anchors which can resist a pull-out force of 2000 lbs. or more are acceptable. A minimum of 4 to 6 anchors are needed, depending on the size, shape and height of the shed.

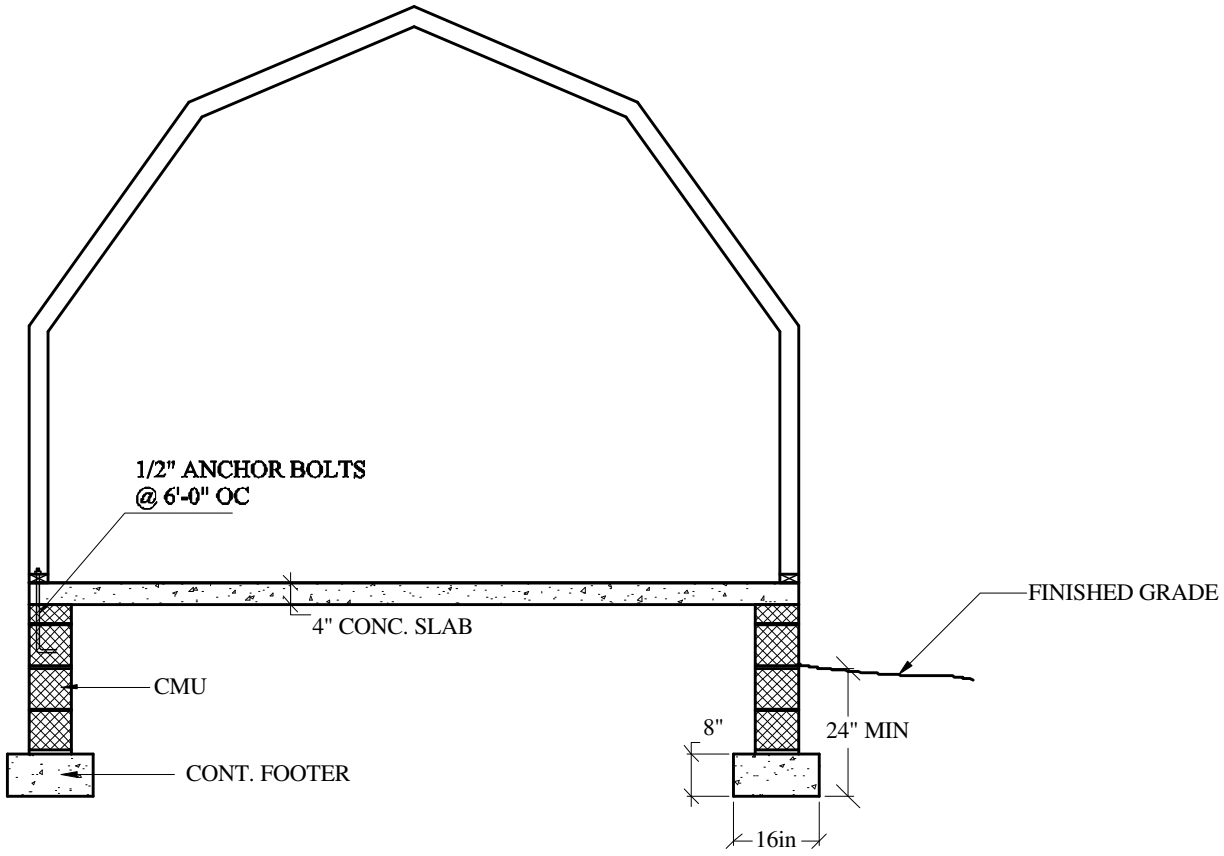
Earth auger anchors may be obtained locally, or via the internet by typing “earth auger anchor” into a search engine. Some web sites I have found which sell the anchors are:
http://www.elitedeals.com/areaankit.html
http://americanea.com/
http://www.shelterworld.net/page/S/CTGY/ACCSASAS
http://shop.incomsupply.com/shop/product.asp?dept_id=140505&sku=703199&
This list is not all inclusive; there are no doubt many sources which sell these anchors.

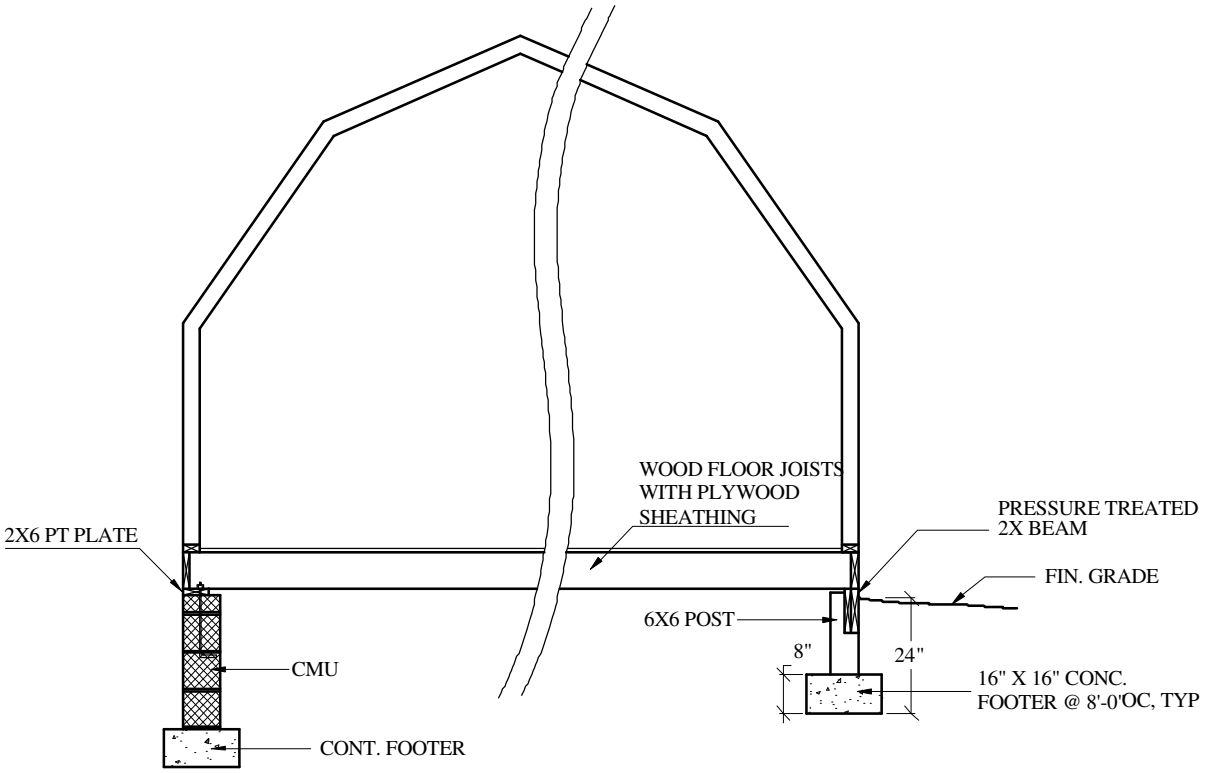
Footings are not required for one-story detached accessory structures used as tool and storage sheds, playhouses and similar uses, **not exceeding 256 sq. ft. of building area**, provided all of the following are met:

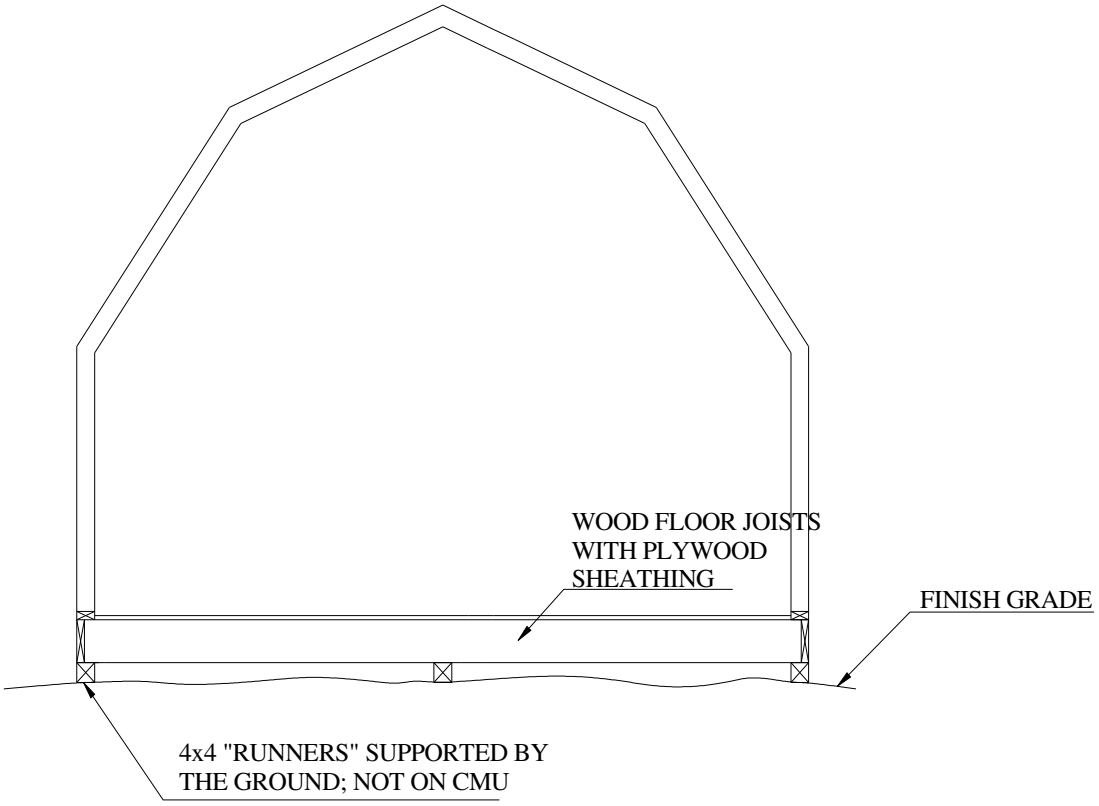
1. The building height is not more that 10 feet.
2. The maximum height from the finished floor level to grade does not exceed 18 inches.
3. The supporting structural elements in direct contact with the ground shall be placed level on firm soil and when such elements are wood, they shall be approved pressure preservative treated suitable for ground contact use.
4. The structure is anchored to withstand the wind loads prescribed by the USBC.

5. The structure shall be of light-frame construction whose vertical and horizontal structural elements are primarily formed by a system of repetitive wood or light gauge steel framing members, with walls and roof of light weight materials, not slate, tile brick, or masonry.
6. Freestanding accessory structures with an area of 600 ft^2 or less, of light-framed construction with an eave height of 10' or less, are not required to have the bottom of the foundation below the frost line.
7. Freestanding accessory structures with an area of 400 ft^2 or less, of **other than** light-framed construction with an eave height of 10' or less, are not required to have the bottom of the foundation below the frost line.




1/2" ANCHOR BOLTS
@ 6'-0" OC
4" CONC. SLAB
FINISHED GRADE
CMU
CONT. FOOTER
8"
24" MIN
16in


WOOD FLOOR JOISTS
WITH PLYWOOD
SHEATHING
PRESSURE TREATED
2X BEAM
2X6 PT PLATE
FIN. GRADE
6X6 POST
8"
24"
CMU
16" X 16" CONC.
FOOTER @ 8'-0'OC, TYP
CONT. FOOTER



This configuration may be used after Oct. 1, 2003

From the 2003 IRC
SECTION R319
PROTECTION AGAINST DECAY

R319.1 Location required. In areas subject to decay damage as established by Table R301.2(1), the following locations shall require the use of an approved species and grade of lumber, pressure preservatively treated in accordance with AWPA U1 for the species, product, preservative and end use or of the decay-resistant heartwood of redwood, black locust or cedars. Preservatives shall conform to AWPA P1/P13, P2, P3 or P5.

1. Wood joists or the bottom of a wood structural floor when closer than 18 inches or wood girders when closer than 12 inches to exposed ground in crawl spaces or unexcavated area located within the periphery of the building foundation.
2. All wood framing members that rest on concrete or masonry exterior walls and are less than 8 inches from exposed ground.
3. Sills and sleepers on a concrete or masonry slab that is in direct contact with the ground unless separated from such slab by an impervious moisture barrier.
4. The ends of wood girders entering exterior masonry or concrete walls having clearance of less than 0.5 inch on tops, sides and ends.
5. Wood siding, sheathing and wall framing on the exterior of a building having a clearance of less than 6 inches from the ground.

6. Wood structural members supporting moisture-permeable floors or roofs that are exposed to the weather, such as concrete or masonry slabs, unless separated from such floors or roofs by an impervious moisture barrier.
7. Wood furring strips or other wood framing members attached directly to the interior of exterior masonry walls or concrete walls below grade except where an approved vapor retarder is applied between the wall and the furring strips or framing members.